To share or not to share: Teachers' use of student data for making pedagogical decisions

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“Before I write my name on the board, I’ll need to know how you’re planning to use that data.”
TWO SHORES IN NEED OF A BRIDGE

http://media.mspnet.org/presentations/bridgingdatagap/transcript.html
Data literacy for teaching is the ability to transform information into actionable instructional knowledge and practices by collecting, analyzing, and interpreting all types of data (assessment, school climate, behavioral, snapshot, longitudinal, moment-to-moment, etc.) to help determine instructional steps. It combines an understanding of data with standards, disciplinary knowledge and practices, curricular knowledge, pedagogical content knowledge, and an understanding of how children learn.

(Mandinach, Friedman, & Gummer, 2015, p. 3)
How do teachers and principals as individuals, and as a department, school, and COLs generate and use recorded student data to guide curriculum and pedagogy?

What knowledge, capacities and school support systems do teachers consider they need in order to make more effective use of data?

What suggestions do teachers and school leaders have for ways to enhance their data literacy for action when presented with data from the classroom, school and national assessments?

What suggestions do teachers and school leaders have for further developing data literacy capacities within teacher education programmes?
DATA COLLECTION

Survey
Multiple choice + open-ended questions
Sent to 2000 schools in March 2017
Questions on how: teachers generate, interpret, share and plan pedagogical actions using students data

Focus groups
5 groups across Waikato and Auckland region
Small & big schools; CoL members
Questions on: schools’ context, content, practice and relationships when analysing student data
**DEMOGRAPHICS**

N = 311 (at least 50% of questions answered)
- 72 teachers only
- 50 leaders only
- 189 both teachers and leaders

Teacher 69
Syndicate Leader 67
HOD 75
Principal 118
DP 62
AP 36
SMS 105

**School type**
- Full Primary School (Year 1-8)
- Secondary School (Year 9-13)
- Contributing School (Year 1-6)
- Secondary School (Year 7-13)
- Intermediate School (Year 7-8)
- Composite School (Year 1 – 13)

**Years of teaching**
- less than 1 year
- 1-3 years
- 4-6 years
- 7-10 years
- more than 11 years

173 respondents = data literacy PLD: 43% teachers; 70% leaders; 59% = both
MOST COMMONLY COLLECTED & USED DATA

- Students' external NCEA standards results
- Students' internal NCEA standards results
- Students' demographic information (e.g., socio-economic status)
- Students' achievement data from School Entry Assessment (SEA) and/or Six year net
- Learning Progressions
- Students' OTJ/National Standards data
- Student data from previous school
- Student peer and/or self assessment
- Students' school tests/exams
- Student data from previous teacher
- Student/teacher learning conversations
- Students' ethnicity information
- Students' health information
- Teacher classroom observations
- Students' achievement data from assessment tools (e.g. PAT, e-asTTe, GLoSS, PROBE)

Percentage of respondents (%)
CONFIDENCE IN ACCESSING STUDENT DATA

Accessing school's/national assessment results

- Very confident
- Confident
- Uncertain
- Not confident
- Not at all confident
- Not applicable

Using school’s student management system to retrieve charts, tables, or graphs

- Very confident
- Confident
- Uncertain
- Not confident
- Not at all confident
- Not applicable

Using school’s student management system to filter students into different groups for analysis

- Very confident
- Confident
- Uncertain
- Not confident
- Not at all confident
- Not applicable
DISCUSSING STUDENT DATA

How often do you discuss students’ data in a group situation with your school's leadership team?

- 36% Never
- 24% Once/twice a year
- 20% Once/twice a term
- 9% 3-4 times a term
- 6% Weekly
- 5% Daily
- 2% N/A

- 2% 5%

How comfortable are you when discussing student data in group situation?

- I always feel comfortable
- Sometimes I feel comfortable
- I mostly don't feel comfortable
- I don’t mind it
- I feel very uncomfortable
- Other

Percentage of respondents (%)

- Both/Other
- Leader only
- Teacher only
Teachers use data to

Identify student learning strengths & needs

You know you need to understand where your students have come from, before you can actually start working effectively with them. (FG)

Some of the asTTle data can be to inform how you plan activities in class. ... going through group learning pathways, through to the cohorts with everyone. And giving them the tools to them take that back to analyse the group pathways of the specific classes that they're timetabled for. (FG)

As a leader I need to be able to break down and analyse all results to make sure students are getting the best support in their learning journey. (Survey)
I actually think there needs to be more attention paid to the transition... Probably around understanding assessment, and - yeah, formative assessment. Because I think that’s a critical area if kids are going to progress further up the school. (FG)

We’ve always done PAT in Term One... what transitions are part of it. Like, we always test the first six weeks. (FG)

...we say if we’re doing these things that’s going to support transition. (FG)
Teachers use data to

Set targets for student learning

I believe data analysis is important to support our assessments of students next learning steps and for effective formative assessment (Survey)

We need to be able to establish next steps for students, plan learning experiences that are relevant ... (Survey)

‘Is this an Excellence?’ ‘Yes.’ ‘Can you mark this now?’ ‘What do I need to do to make it an Excellence?’ Yeah. I mean I guess ideally,... that’s when you’re doing that diagnostic assessment, ... formative assessment, ...talking about out next steps.. (FG)
Participants had concerns regarding their own data literacy skills and the accuracy of their own interpretation and understanding of how to use the collected data to make informed decisions.

I have not been teaching for long compared with more experienced staff members and I don't want them to think I am overstepping my boundaries. (Survey)

I haven't had much practice at reporting on it, and feel that leadership may interpret data differently. Data often doesn't give a full picture of what is happening for students or a class. (Survey)

So our teachers need to be able to place that child in the curriculum level and go from there,... Make sure that [what] comes from our contributing schools, [we] honour it, so that we trust them. (FG)
PERCEIVED CONCERNS 2

The teachers, particularly the ones who are feeling a little bit threatened by their data being pulled out...(FG)

...because what we have noticed, very strongly, is that a principal has so much power and influence over their staff and their school. (FG)

I also feel under pressure when the government sets targets of achievement that are then passed onto us and we are pressurised when we are not meeting the targets. (FG)

Well, that whole National Standard judgement is very blunt...So it doesn’t show [the] progress necessarily that we see. That’s not to say that our data you know, equates reasonably well with everybody else’s. (FG)

...people have got to have that shared language for learning, and for competence, and have those discussions in the first place...(FG)
Takeaways

Teachers and leaders do use data to inform their practice and student ‘learning journeys’ (i.e., immediate and longer term student learning)

Concerns about comprehensiveness of data and variations in data judgment/interpretation = the need for PLD that develops a shared understanding, language & data literacy for teachers and leaders

A supportive & collaborative culture is required if teachers are to feel comfortable, confident, and capable to share and discuss data
You've got to be data literate... You've got to know what you're looking for, and why you're looking for it. And then what you're going to do with it. And how it relates to whatever [perspective]... (FG)
We welcome your questions

"My grades could be better if the school had a data driven, evidence based curriculum in the classroom."
Data literacy for teachers

- Find Data
  - Data Location
- Evaluate Data
  - Data Comprehension
  - Data Interpretation
- Use Data
  - Instructional Decision Making
  - Question Posing

U.S. Department of Education report Teachers' Ability to Use Data to Inform Instruction: Challenges and Supports (2011)